

REMARKS

This is intended as a full and complete response to the Office Action dated June 18, 2003, having a shortened statutory period for response set to expire on September 18, 2003. Please reconsider the claims pending in the application for reasons discussed below.

Claim Rejections – 35 USC § 112

Claims 1-10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1-10 have been cancelled by Applicant. Applicant believes that new claims 11-21 more particularly point out and distinctly claim the subject matter in conformity with current U.S. practice.

Claim Rejections – 35 USC § 102

Claims 1-8 and 10 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by U.S. Patent No. 5,680,489 to *Kersey*.

Regarding claim 1, the Examiner states that *Kersey* discloses a method of measurement using a fiber Bragg grating wavelength interrogation apparatus, being able to measure the reflected or transmitted Bragg wavelengths from an FBG sensor (see column 9-12).

While claims 1-8 and 10 have been canceled, Applicant traverses the rejection as applied to new claims 11-21 since the new claims include at least some similar limitations to the canceled claims. Therefore, Applicant respectfully submits that a non-polarized broadband light source and Bragg gratings that return a single narrowbeam reflected light signal irrespective of polarization as disclosed in *Kersey* does not teach a system for measuring orthogonally polarized minimum and maximum Bragg wavelengths that includes a polarized light source, at least one birefringent fiber Bragg grating sensor for reflecting the orthogonally polarized Bragg wavelengths, and a polarization controller. Additionally, *Kersey* does not teach a system for eliminating fading of a signal and optimizing the signal's amplitude that includes at least one birefringent, dual-polarization fiber Bragg grating sensor that reflects two orthogonally polarized eigenstates with different wavelengths, a linear

polarizer for passing the two orthogonally polarized eigenstates therethrough, and a polarization controller used to align the two orthogonally polarized eigenstates at forty five degrees relative to the linear polarizer thereby providing a beat signal with a maximum amplitude. Accordingly, Applicant submits new claims 11-21 are patentable over *Kersey*.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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